# SHARP

SHARP ELECTRONIC CASH REGISTER

ER-2905 ER-2908

**INSTRUCTION MANUAL** 

MODEL



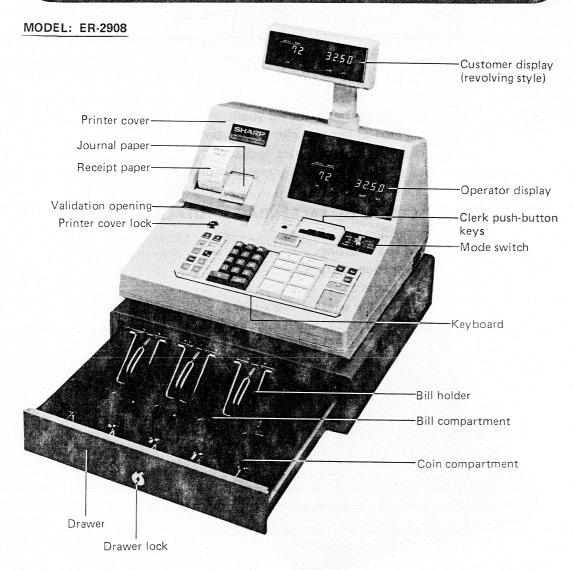
The above photo shows model ER-2908.

# CONTENTS

PHYSI	CAL CHARACTERISTICS OF THE ER-2905/2908 REGISTERS 4
KEYBO	DARD LAYOUT AND DUTIES OF SWITCH AND KEYS 6
DESCF	RIPTION OF THE DISPLAY
OVER	FLOW ERROR ALARM11
TAB A	AND 1/2 KEY12
PROGI	RAMMING
1.	Machine-number programming
2.	Consecutive-number programming14
3.	Programming for departments14
4.	Programming for PLU (Price Look-up) — option16
5.	Programming for the [%1] and [%2] keys16
6.	Programming the limit to the number of entry digits for the RA,
	PO , ⊝ , CH , and CR keys17
7.	Programming the amount for ⊖ key17
8.	Programming journal print forms
9.	Programming the number of times of validation printing17
10.	Programming for time printing "Yes"/"No"18
11.	Programming an amount limit to cash in drawer18
12.	Programming VAT (Value Added Tax) rates (option)18
13.	Programming for automatic VAT calculation "Yes"/"No" (option) 19
14.	Reading the contents of programming20
DATE	MODE22
1.	Date setting
2.	Time setting
3.	Time span setting for drawer alarm
4,	Printing of the Employee Arrival and Departure Times23
TIME	DISPLAY
	TRATIONS
1.	Repetitive registration
2.	Multiplication registration
3.	Registration of single-item cash sale
4.	Display of sub-total
5.	Deduction registration
6.	Percent calculation (premium or discount)
7.	Computation of VAT (Value Added Tax) — option
8.	Amount-tendered registration
	(1) Change calculation
	(2) Multiple cash or cheque tendering
	(3) Mixed tendering — cash + cheque
	(4) IVIIXEG LENGERING — CASH OF CHEQUE + CREGIT

9. Refund registration
10. Printing non-add code numbers30
11. Received-on-account and paid-out registrations
12. Exchange (no-sale)
RECEIPTING FUNCTION32
VALIDATION PRINTING FUNCTION
<b>CORRECTION</b>
1. Correction of entered numbers
2. Correction just after registration (direct void)35
3. Correction of the next-to-last or earlier registration before depression of
the TL , CH or CR key (indirect void)
4. Cancellation of a previously entered transaction using the omega mode
(i.e. omegode lock position)
READING AND RESETTING OF SALES (DAILY TOTAL)38
1. Individual clerk reading and resetting
2. Full clerk reading and resetting39
3. Reading the cash/cheque in drawer40
4. Reading the hourly sales
5. Reading and resetting the sales for every item42
6. Reading and resetting the PLU-based sales44
READING AND RESETTING OF PERIODIC CONSOLIDATION45
1. Full item reading and resetting of periodic consolidation
2. Reading of the net of each daily total
COMPULSORY CASH/CHEQUE-IN-DRAWER DECLARATION47
IN CASE OF POWER FAILURE48
REMOVING THE TILL AND THE DRAWER49
OPENING THE DRAWER BY HAND49
INSTALLING AND REMOVING THE PAPER ROLL50
REPLACING THE INK ROLLER55
INK REFIL5
BEFORE CALLING FOR SERVICE
SPECIFICATIONS5
LIST OF OPTIONS5

# PHYSICAL CHARACTERISTICS OF THE ER-2905/2908 REGISTERS



Note: The drawer for the U.K. or Australia model is different from the one for the

West Germany model.

Drawer for the U.K. model:

4 slots for bills and 8 for coins; the drawer

lock is on the right side of the drawer.

Drawer for the Australia model:

6 slots for bill and 5 for coins; the drawer

lock is on the right side of the drawer.

#### **■** Drawer lock

Lock: Turn 180 degrees

counterclockwise.

Unlock: Turn 180 degrees

clockwise.

#### ■ Printer cover lock

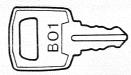
Turn 90 degrees Lock:

clockwise.

Unlock: Turn 90 degrees

counterclockwise.

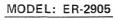
the West Germany model



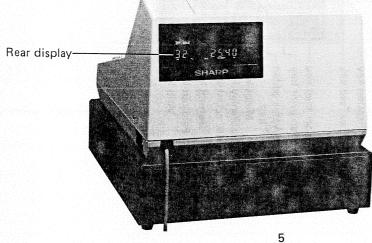
■ Printer cover lock key

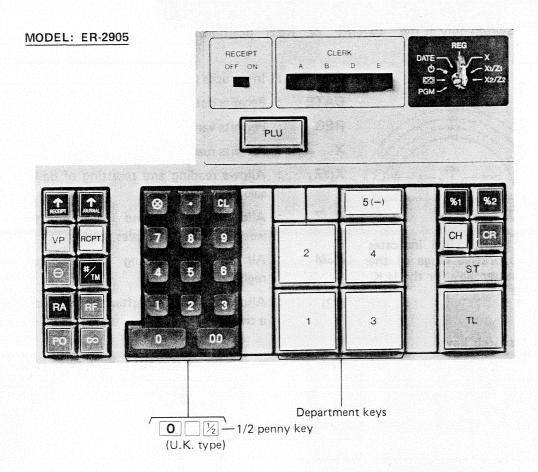
■ Drawer lock key for ■ Drawer lock key for the U.K. or Australia model





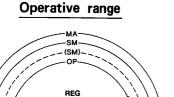






#### 1. Mode switch/power switch

Change the switch over by inserting the supplied mode key — operator (OP), submaster (SM), or master (MA) key. All these keys can be inserted into or drawn out of the switch only at the " $\mathbf{U}$ /OFF" or "REG" position.



The broken line indicates

the operative range of the submaster key for the U.K.

X1/Z1

X2/Z:

**Ů/OFF**: Interrupts power supply.

DATE : Permits date or time setting.

**REG**: Permits various registrations.

X : Permits reading of sales total by clerk.

 $X_1/Z_1$ : Allows reading and resetting of daily

sales total.

 $X_2/Z_2$ : Allows reading and resetting of

weekly or monthly sales total.

PGM: Allows programming essential to

registrations.

: Allows cancellation after the finish of

a transaction.

#### Mode switch keys

model,

Master key (MA)

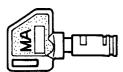
--- numbered 6B5

Submaster key (SM)

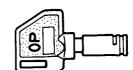
S

— numbered 3B2 for the U.K. model or 6B2 for the West Germany or Australia model

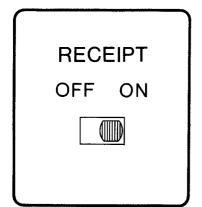
Operator key (OP)
— numbered 0B9







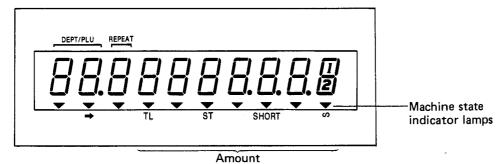
#### 2. Receipt ON-OFF switch



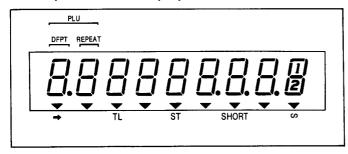
This switch permits and prohibits the receipting. To permit printing on the journal alone without the need to print a receipt, push the switch towards the OFF position.

# DESCRIPTION OF THE DISPLAY

• ER-2908 Operator/Revolving Display



• ER-2905 Operator/Rear Display



\* The number of repeats is displayed from "2" and counted up with each repeat. When you've registered ten times, the display shows "0".

Example: 
$$(2 \rightarrow 3 \rightarrow 4 \cdots 9 \rightarrow 0 \rightarrow 1 \rightarrow 2 \cdots)$$

- \* The ER-2905 does not display the numer of repeats for PLU registrations.
- \* If cash in drawer exceeds a programmed limit, a decimal point appears in the 9th column of the operator display to alert the operator. (See page 18.)

#### • Machine state indicator lamps

→: This lamp lights up accompanying a display of change or when the sales

is negative.

TL: This lamp lights up when you terminate a transaction by pressing the

TL , CH or CR key.

ST: This lamp lights up when a sub-total is calculated.

SHORT: This lamp lights up when the amount tendered is less than the sales.

: This lamp lights up during direct or indirect void.

: This lamp lights up

during programming.

: This lamp lights up

when an error is

detected.

These lamps light up in the 9th place — the place where the number of repeated

registrations shows up.

— : This lamp lights up when a minus departmental, discount, deduction or (Floating) refund registration is carried out or when a correction is made.

# **OVERFLOW ERROR ALARM**

The purpose of the overflow error alarm is to alert the operator that the digit capacity of the register has been exceeded. The audible alarm sounds (beep) is accompanied by the " $\xi$ " symbol in the register display. All transaction registration is dis-allowed until the error is cleared. To clear the error press the CL key.

	Error condition	Action			
(1)	Number entry greater than 8 digits.	Clear the entry and enter a valid number.			
(2)	Registration is made over the preset limit to the number of digits or to the amount entry.	Clear the registration and make the registration within the existing limit.			
(3)	Sub-total of one transaction exceeds 7 digits.	<ul> <li>Clear the entry and press the TL, CH or CR key to finish the transaction. The machine prints the amount that had been calculated before the error occured.</li> </ul>			
(4)	Q'ty x Unit price exceeds 7 digits.	Clear the registration and re-enter properly.			

If a key is operated by mistake, the error alarm signal sounds briefly.
 The machine will refuse any further key input at this time, so operate proper keys successively.

#### Drawer Alarm

If the drawer remains opened over a programmed time span after a transaction is finalized, the register beeps continuously for warning. This warning can be cancelled by closing the drawer. (See page 23.)

## TAB AND 1/2 KEY

This Instruction Manual refers to various registrations on the basis that TAB is set at "2".

Even in the case of using other register whose TAB is set at 0, 1, 3, or 3', we believe this Manual is helpful for you.

In TAB setting, any of 0, 1, 2, 2', 2", 3 and 3' can be selected. However, only when TAB-3', the "1/2" key is operative.

Example: TAB-set display and printing.

Key operation	TAB set	Display	Printing		
1 2 3 4 1	0	1 1234	1 *1234		
	1	1 123.4	1 *123.4		
	2	1 12.34	1 *12.34		
	2′	1 12.35	1 *12.35		
	2"	1 12.34	1 *12.34		
	3	1 1.2 3 4	1 * 1.2 3 4		
	3'	1 12.34	1 *12.34		

If TAB-2' is selected, depression of a department or PLU key displays and prints every preceding numeric entry with fractions not greater than 2 disregarded and those not lower than 8 raised to unit.

If TAB-2" is selected, every total amount is figured out with fractions not greater than 2 disregarded and those not lower than 8 raised to unit.

Example: Operation of 1/2 key

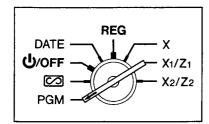
Key operation	TAB set	Display	Printing		
1234	3′	1234			
1/2		1234%			
1		1 1 2.3 4 1/2	1 *12.34 ½		

Note: No entry of number can follow the operation of 1/2 key.

The list below shows the examples of the decimal fraction treatment and the following TAB-based fractional treatment.

	Calculation result	Rounding		Raising		Disregarding	
ТАВ			After TAB-based treatment		After TAB-based treatment		After TAB-based treatment
	0.0	0		0		0	
0	0.1 ~ 0.4	0		1		0	
	0.5 ~ 0.9	1		1		0	
	0.0000 ~ 0.0044	~ 0.004	0.00				
3′	0.0045 ~ 0.0054	0.005	0.001/2				
	0.0055 ~ 0.0099	0.006 ~	0.01				
	0.000	0.00	0.00				
	0.001 ~ 0.024	~ 0.02	0.00				
	0.025 ~ 0.074	0.03 ~ 0.07	0.05				
2', 2"	0.075 ~ 0.099	0.08 ~	0.10				
	0.001 ~ 0.020			~ 0.02	0.00		
	0.021 ~ 0.070			0.03 ~ 0.07	0.05		
	0.071 ~ 0.099			0.08~	0.10		
	0.001 ~ 0.029					~ 0.02	0.00
	0.030 ~ 0.079					0.03 ~ 0.07	0.05
	0.080 ~ 0.099					0.08 ~	0.10

# **PROGRAMMING**



• Turn the mode switch to the PGM position.

1. Machine-number programming

Example: Setting the machine number at "123"

1 2 3 → <sup>#</sup>/<sub>TM</sub>

Machine number: a maximum of 3 digits-

00-00-00

123 M2 0001 A

2. Consecutive-number programming

Example: Starting from "1001"

 $\boxed{1} \boxed{0} \boxed{0} \boxed{0} \rightarrow \boxed{ST}$ 

123№ <u>1000</u>A

00-00-00

Consecutive number: a maximum of 4 digits -

Note: When you want to start from "1," press the ST key only.

3. Programming for departments

The following four items (1) through (4) can be programmed for individual departments.

(1) Single-item cash sale function

This function allows each transaction to be finalized as a cash sale without depression of the TL key.

(2) Limit to the number of entry digits

0 to 7 digits

(3) Departmental status "Plus" or "Minus".

• "Plus": Allows normal sales registrations.

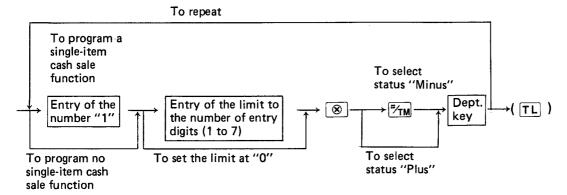
"Minus": Allows the registration of payment to customers, for example

bottle-return registration.

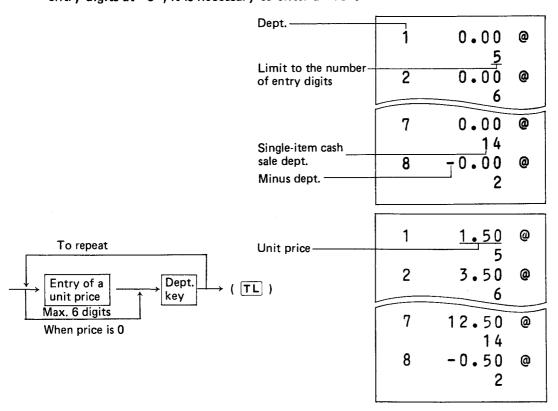
(4) Unit price

A maximum of 6 digits (\$ 0.01 to 9999.99)

#### < Procedure >

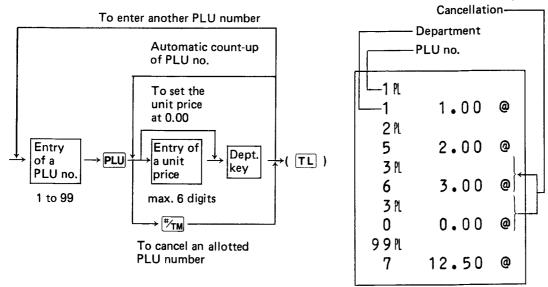


Note: To program single-item cash sale function and set the limit to the number of entry digits at "0", it is necessary to enter a "10".



#### 4. Programming for PLU (Price Look-up) — option

 Allot PLU numbers to individual items and program a unit price and department for each of these numbers.

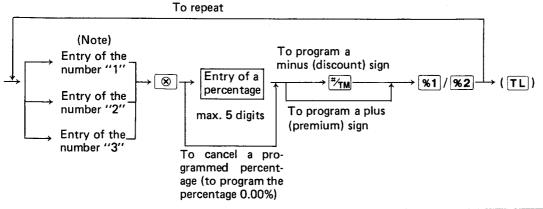


Note: The PLU number counter automatically goes upward.

#### 5. Programming for the %1 and %2 keys

- (1) Programming percentages (0.01 to 999.99%)

  The machine allows the programming of percentages for departmental amounts, subtotals and both.
- (2) Programming plus (premium) and minus (discount) signs.

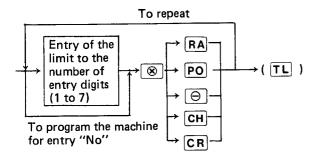


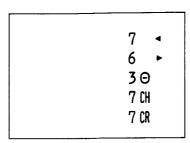
Note: Entry of the number "1" allows the programming of the percentage for a sub-total.

Entry of the number "2" allows the programming of the percentage for a departmental amount.

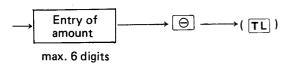
Entry of the number "3" allows the programming of the percentage for both of a departmental amount and sub-total.

6. Programming the limit to the number of entry digits for the RA , PO , 🗇 , CH , and CR keys.





7. Programming the amount for  $\Theta$  key.

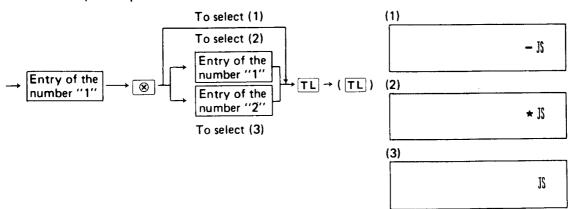




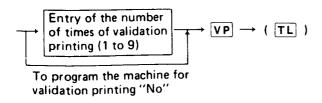
#### 8. Programming journal print forms

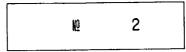
This programming selects the following three types of journal print forms.

- (1) Print form that shows all registered information.
- (2) Print form that shows only sales total (including amount tendered and change).
- (3) Print form that does not show any information about the amounts registered into plus departments and PLUs.



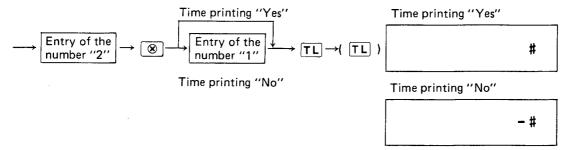
9. Programming the number of times of validation printing



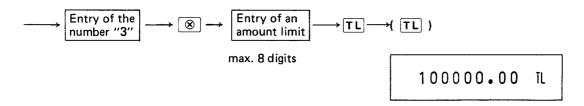


#### 10. Programming for time printing "Yes"/"No"

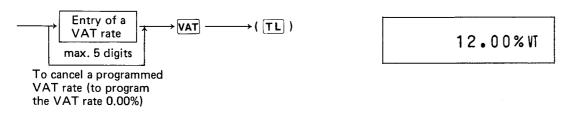
This programming decides whether or not the machine should print a transaction time on the receipt and journal whenever a transaction is completed.



#### 11. Programming an amount limit to cash in drawer.

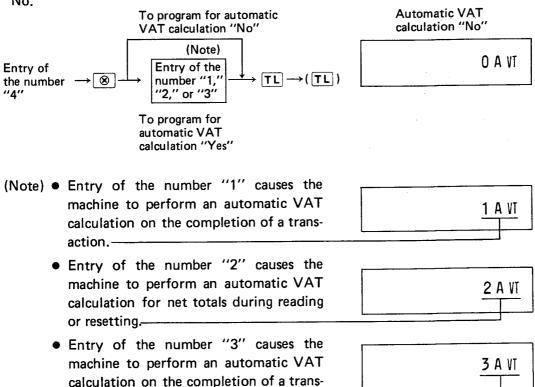


#### 12. Programming VAT (Value Added Tax) rates (option)



### 13. Programming for automatic VAT calculation "Yes"/"No" (option)

If the machine is programmed for automatic VAT calculation "Yes," it automatically calculates a VAT using a programmed VAT rate and then prints the calculation result on the completion of a transaction and/or during reading or resetting. For manual VAT calculations, program the machine for automatic VAT calculation "No."

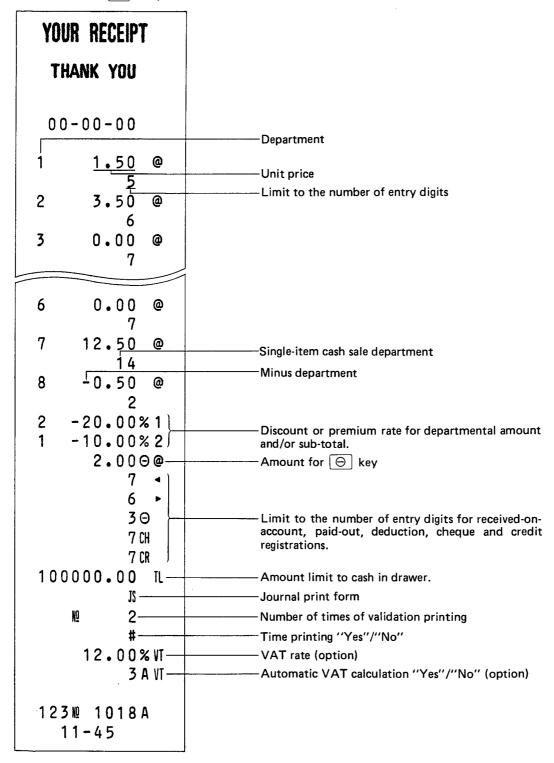


action and during reading or resetting.-

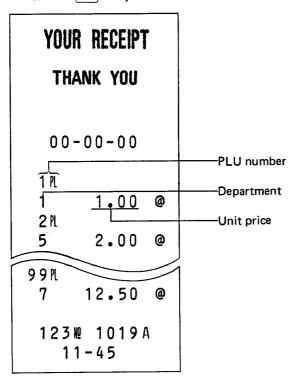
#### 14. Reading the contents of programming

(1) Reading the contents of programming for departments and functions.

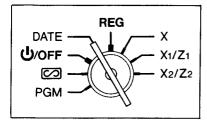
Press the TL key.



(2) Reading PLU programs
Press the PLU key.



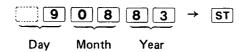
## DATE MODE



- Turn the mode switch to the DATE position.
- Once the clock unit is started at the correct time, it continues to run as long as the battery is charged and updates the date properly.
- Both the receipt and journal papers will continue to show the previous date even when the date has been updated internally. It is therefore necessary to ring-up an empty receipt everyday before the start of the business (registrations) by turning the mode switch to the DATE position and pressing the ST key, updating the print of date. If this operation is not done, the first transaction of the day is printed with the previous date.

#### 1. Date setting

Example: Setting at 9th August 1983



Notes:

- 1. The leading "0" does not need to be entered.
- 2. On the completion of the date setting, press the ST key to print a receipt, then check the print.
- 2. Time setting (on the 24-hour cycle system)

Example: Setting at 14:30

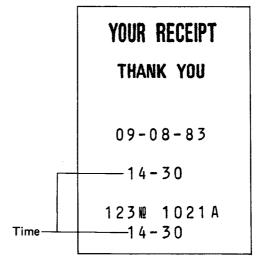


# YOUR RECEIPT THANK YOU

00-00-00

09-08-83

123W 1020A



#### 3. Time span setting for drawer alarm

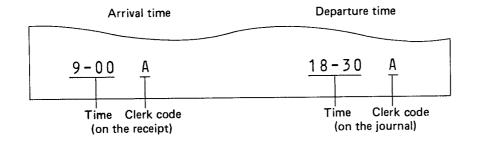
- Time span setting can be made at increments of one second between 1 and 255 seconds.
- Setting



Note: When the alarm function is not desired, enter "10000."

#### 4. Printing of the Employee Arrival and Departure Times

- (1) This printing can occur in validation.
- (2) Key operation
  - Arrival time (printed on the receipt)
     Numeric key 1 → VP
  - ② Departure time (printed on the journal)Numeric key 2 → VP
- (3) Sample printout



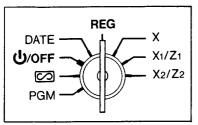
## TIME DISPLAY

The time can be displayed by pressing the \*TM\* key in the REG, DATE or mode with the previous registration or operation completed. The time display can be cleared by pressing the CL key or beginning the following registration.

Display of 10:25

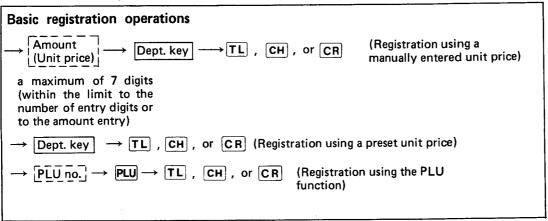
This bar appears every second.

# **REGISTRATIONS**



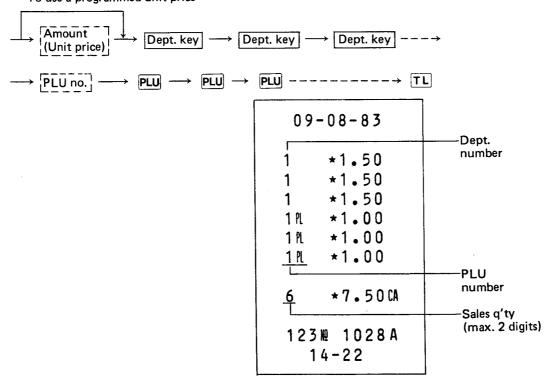
• Turn the mode switch to the REG position.

• The PLU is an optional function.



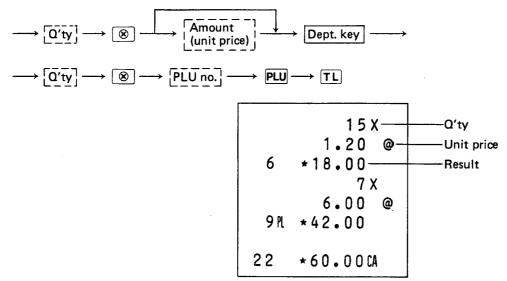
#### 1. Repetitive registration

To use a programmed unit price



Note: The repeat function can be used any number of times until the sub-total reaches \$99999.99.

#### 2. Multiplication registration



• Quantity:

max. 6 digits (4-digit integer + 2-digit decimal)

• Unit price:

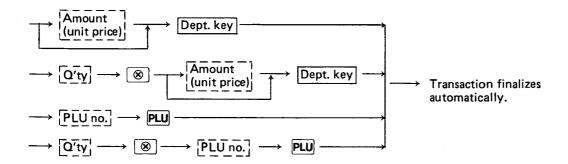
within a programmed limit to the number of entry digits or to

the amount entry (max. 7 digits)

Quantity x Unit price: max. 7 digits

#### 3. Registration of single-item cash sale

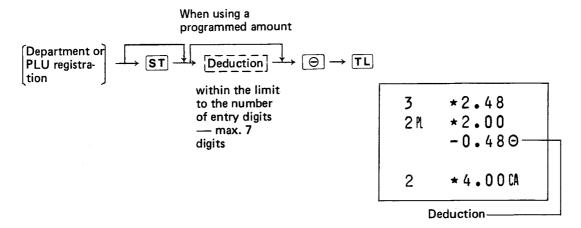
- This function is practical when you need to finalize in cash each time a single item is registered. It is operative only for the department to which it has been assigned.
- If this function is assigned to a PLU department, the corresponding PLU can be used for single-item cash sale.



#### 4. Display of sub-total

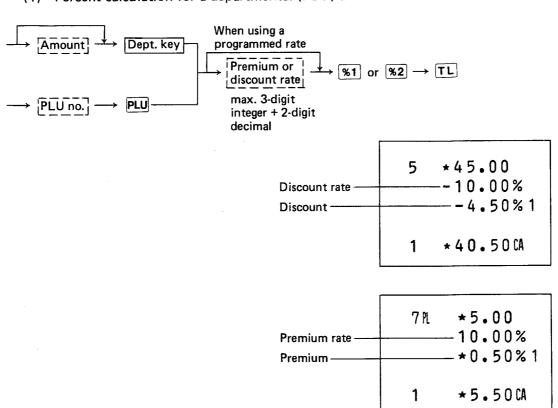
Press the ST key at any point during registrations. The machine will display the then sub-total.

#### 5. Deduction registration

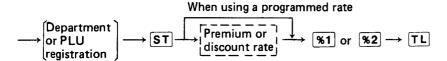


#### 6. Percent calculation (premium or discount)

#### (1) Percent calculation for a departmental (PLU) amount



#### (2) Percent calculation for a sub-total



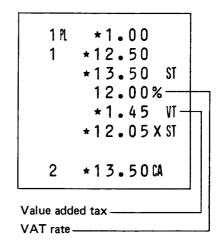
Note: This machine does not allow any calculation that would result in a negative subtotal. In other words, any discount rate of over 100% cannot be entered.

#### 7. Computation of VAT (Value Added Tax) — option

This function is applicable to sub-totals.

When using a programmed VAT rate

Note: If the machine has been programmed for automatic VAT calculation "Yes" in the PGM mode, it automatically computes and prints a VAT on the completion of each transaction and/or during reading or resetting.

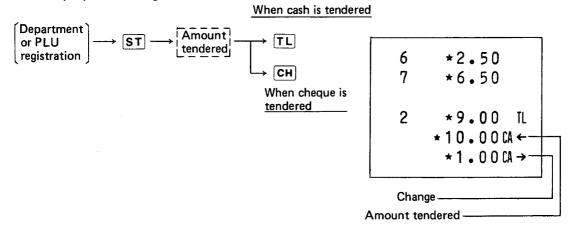


#### 8. Amount-tendered registration

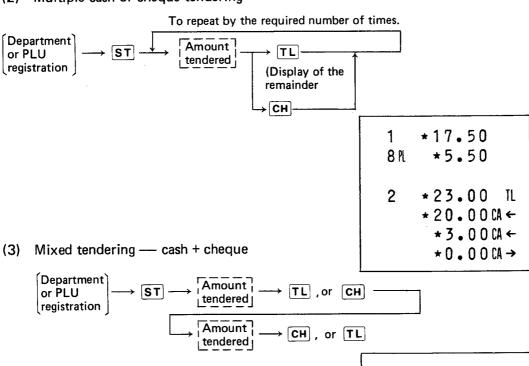
The cash register allows cash- or cheque-tendered registrations.

#### (1) Change calculation

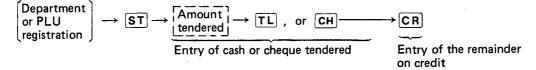
If the amount tendered is greater than the sales amount, the cash register displays the change.



#### (2) Multiple cash or cheque tendering



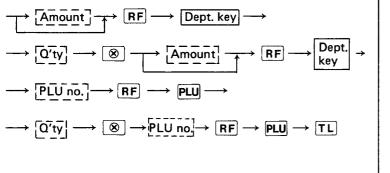
#### (4) Mixed tendering — cash or cheque + credit



1 \*10.50 5 \*25.00 2 \*35.50 TL \*20.00CA ← \*15.50CR

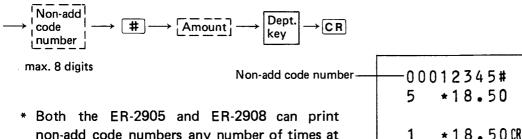
#### 9. Refund registration

Press the RF key prior to a department or the PLU key.



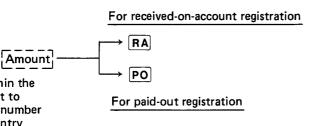
-1.25 RF
1.45 @
-7.25 RF
-1.00 RF
-6 X
2.00 @
-12.00 RF
*21.50CA→

#### 10. Printing non-add code numbers



\* Both the ER-2905 and ER-2908 can print non-add code numbers any number of times at any point except during amount-tendered registrations.

#### 11. Received-on-account and paid-out registrations





**\*50.00** 

#### 12. Exchange (no-sale)



within the limit to

the number

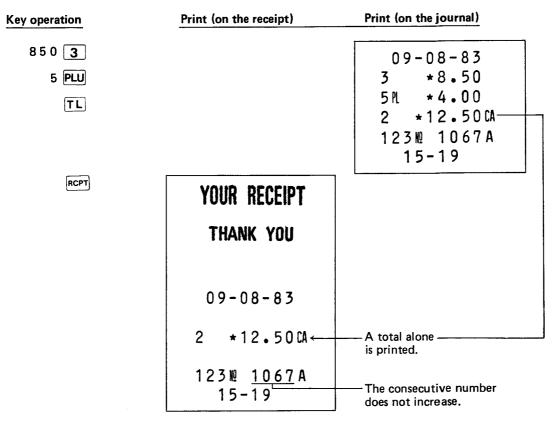
of entry digits max. 7 digits

NS

# RECEIPTING FUNCTION (with the receipt ON-OFF switch at the OFF position)

When customers require to print receipts after the finish of transactions with the receipt ON-OFF switch at the OFF position (no receipting), press the RCPT key. This will make a receipt that shows a total print alone but not detailed print.

#### Example:



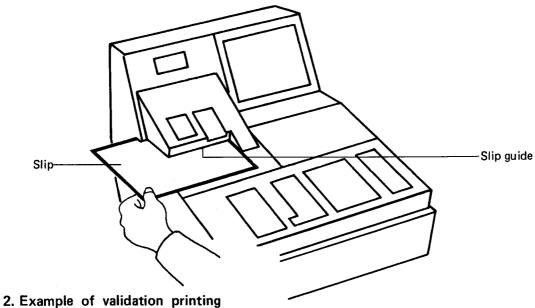
Note: If your register is equipped with the VAT function, this function does not work.

# VALIDATION PRINTING **FUNCTION**

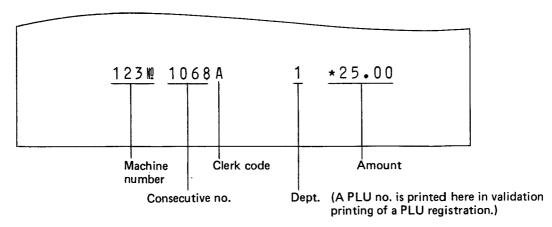
The ER-2905/2908 provides validation printing for each item and that of the sales total.

#### 1. Procedure for validation printing

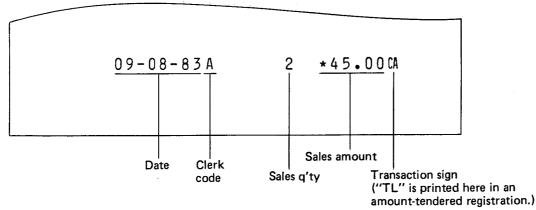
After the completion of a department or PLU registration or the finalization of a registration through the TL , CH , CR , RA or PO key, insert a slip into the printer with its printing side downward, then press the VP key.



- Validation printing after a department (or PLU) registration -



- Validation printing after the finalization of a registration -



#### 3. Validation slip specification

Make validation slips according to the following specification. The use of any slips other than specified causes the printer to malfunction.

- (1) Type of paper
  - a) plain paper, b) pressure-sensitive paper, c) duplicating carbon paper
- (2) Width: over 115 mm
- (3) Copying ability and paper thickness
  - Plain paper alone (when any copies are not needed.)
     Plain paper: 0.09 to 0.19 mm thick (82 to 157 g/m² in weight)
  - Plain paper + duplicating paper

Plain paper (thick): 0.09 to 0.19 mm thick (82 to 157 g/m<sup>2</sup> in weight)

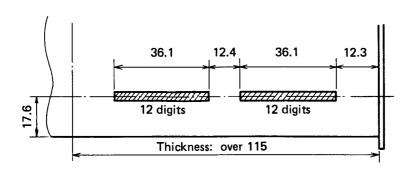
Pressure-sensitive paper: 0.08 mm thick
Duplicating carbon paper: 0.03 mm thick

Plain paper (thin): 0.06 mm thick (47 g/m<sup>2</sup> in weight)

The above-mentioned types of paper can be combined. However, the overall thickness must not exceed 0.3 mm and two or more sheets of thick plain paper must not be used.

#### (4) Printing position

in mm



# CORRECTION

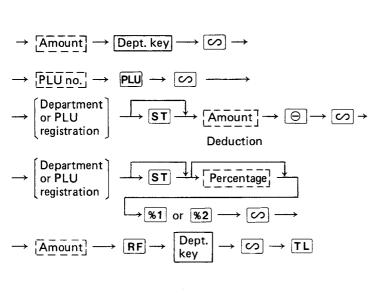
#### 1. Correction of entered numbers

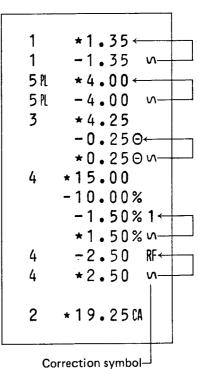
When you entered an incorrect number, delete it by pressing the <code>CL</code> key and re-enter a correct number.

#### 2. Correction just after registration (direct void)

To make a correction just after the department, PLU, deduction, premium, discount

or refund registration, press the key.





# 3. Correction of the next-to-last or earlier registration before depression of the TL, CH or CR key (indirect void)

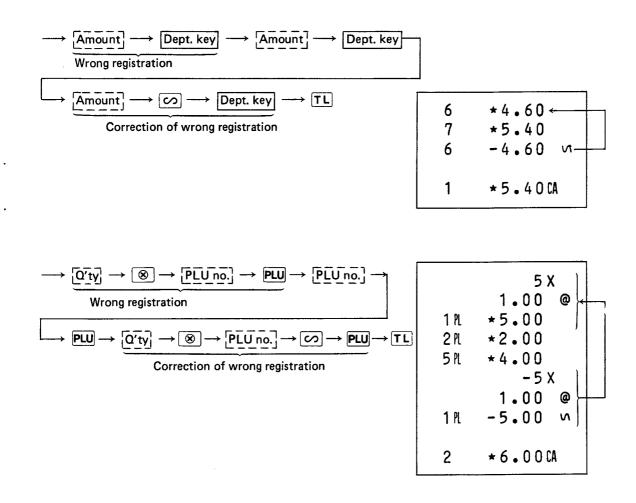
This correction is applicable to department and PLU registrations.

#### Correction of department registrations

Press the  $\bigcirc$  key after the entry of an amount to be corrected (or after the operations "Q'ty"  $\rightarrow \otimes$   $\rightarrow$  "Amount (unit price)" in the case of multiplication registration), then press the corresponding department key.

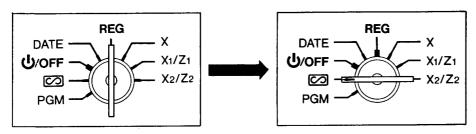
#### Correction of PLU registrations

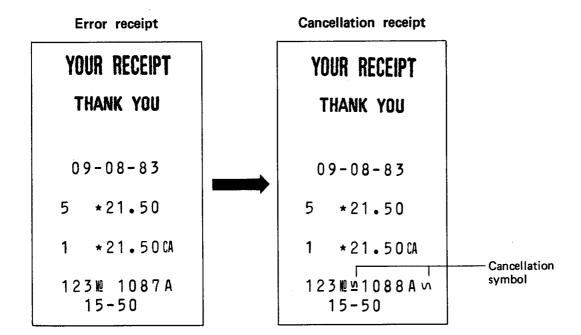
Press the  $\bigcirc$  key after the entry of a PLU no. to be corrected (or after the operation "Q'ty"  $\rightarrow$  8  $\rightarrow$  "PLU no." in the case of multiplication registration), then press the  $\bigcirc$  key.



## 4. Cancellation of a previously entered transaction using the mode (i.e. mode lock position)

Turn the mode switch to the position by means of a master (MA) or submaster (SM) key and register the same details as printed on an error receipt. In this mode, registrations are made in the reverse fashion, namely negatively, of normal registrations — registrations in the REG mode — and registered amounts are subtracted from each totalizer and also added to a separate mode totalizer.



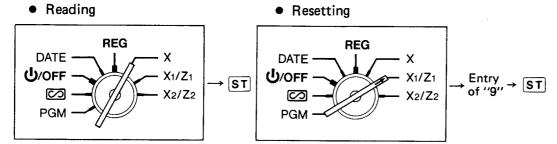


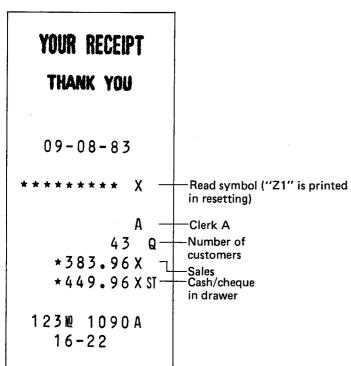
Note: Error and cancellation receipts are be of avail as evidence. Keep them without fail and append them together with resetting sheet.

# READING AND RESETTING OF SALES (DAILY TOTAL)

#### 1. Individual clerk reading and resetting

Press the clerk push-button key (A through E) that corresponds to a clerk whose sales data needs to be read or reset, then carry out the following operations.

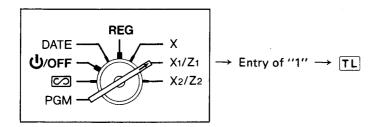


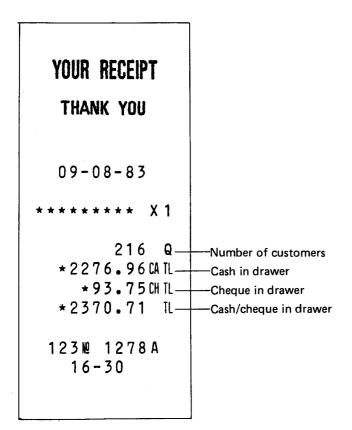


Note: When the declaration of cash/cheque in drawer is compulsive, the above operations cannot achieve any reading.

Consult the "COMPULSORY CASH/CHEQUE-IN-DRAWER DECLARATION" on page 47.

#### 3. Reading the cash/cheque in drawer

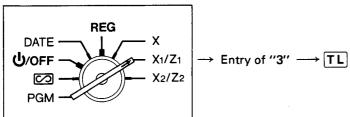


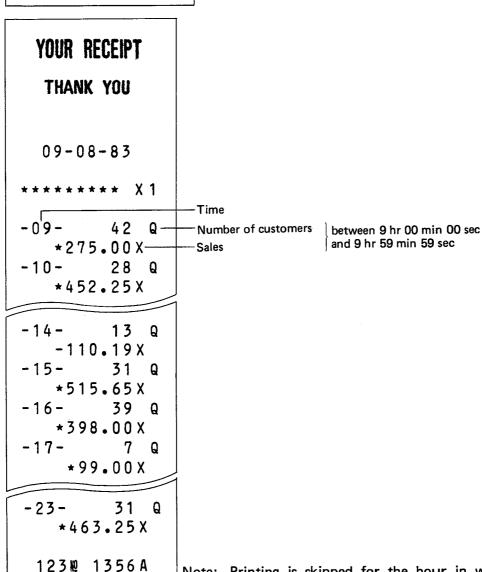


#### 4. Reading the hourly sales

23-57

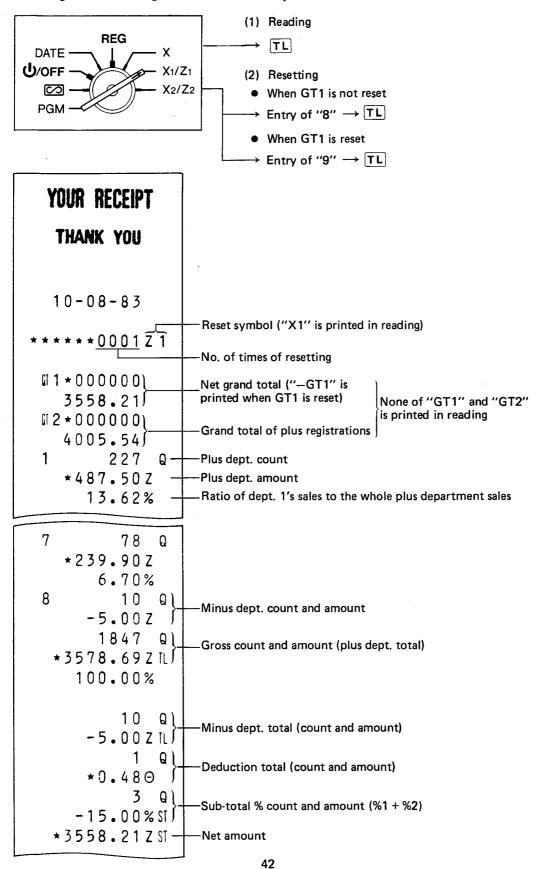
This function enables you to take the reading of the sales and the number of times of transaction (or the number of customers) by hour.

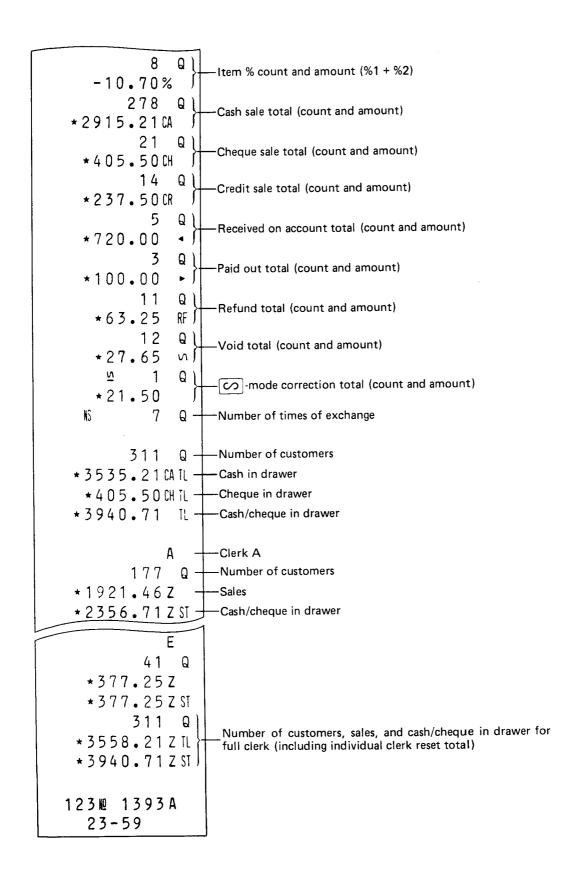




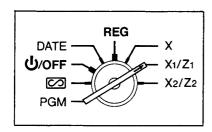
Note: Printing is skipped for the hour in which no sales transaction has occurred.

#### 5. Reading and resetting the sales for every item

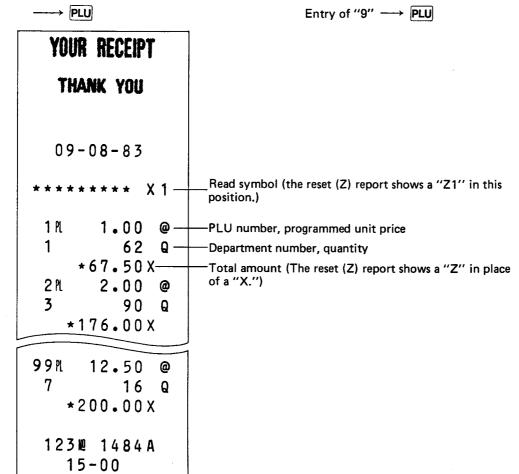




#### 6. Reading and resetting the PLU-based sales

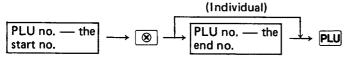


- Turn the mode switch to the X<sub>1</sub>/Z<sub>1</sub> position and perform the following key operations.
- (1) Reading for every PLU
- (2) Resetting for every PLU



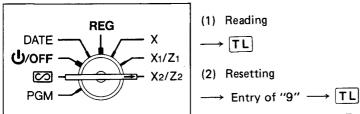
(3) Reading for a specified range of PLUs

This function allows you to read the contents of individual PLUs between two specified PLU numbers.



# READING AND RESETTING OF PERIODIC CONSOLIDATION

#### 1. Full item reading and resetting of periodic consolidation



## YOUR RECEIPT

09-08-83
\*\*\*\*\*0006Z1\*\*\*\*\*0001Z2-

No. of times of periodic
consolidation resetting
(Z2)

No. of times of daily

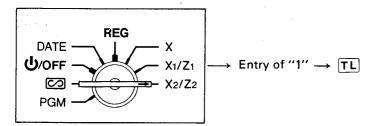
sales total resetting (Z1)

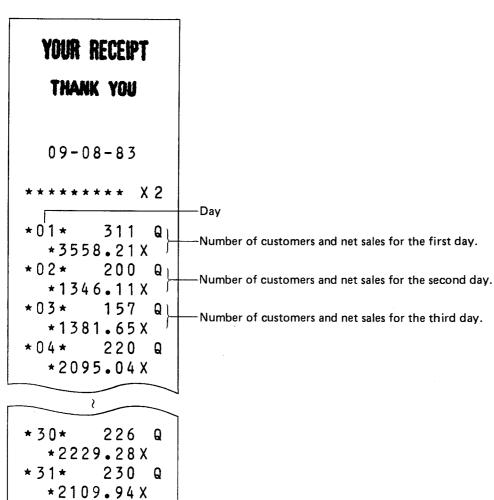
3473.86 1 624 Q \*1508.88Z 11.73% Grand total of plus registrations

187 Q \*718.90Z 5.59% 46 Q 8 -23.00Z 4150 Q \*12865.067 IL 100.00% 46 Q -23.00 Z IL 9 Q **★4.13**⊖ 43 Q -117.70% ST \*12720.23ZST

41 Q -25.49% 1142 Q \*10300.48CA 111 Q \*1346.25CH 93 Q \*1073.50CR 21 Q **\*1365.00** 16 **\*405.00** 38 Q **\*172.25** RF 28 Q **\*84.90** V <u>v</u> 1 Q **\*21.50** 32 Q 1344 Q \*11260.48CATL \*1346.25CHTL \*12606.73 IL 698 Q \*6302.45Z \*6409.70ZST

#### 2. Reading of the net of each daily total

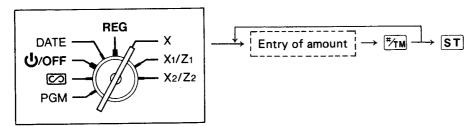




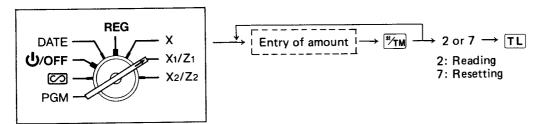
## COMPULSORY CASH/CHEQUE-IN-DRAWER DECLARATION

Open the drawer before individual clerk reading (or full clerk reading or resetting), count cash/cheque in drawer, and enter the count.

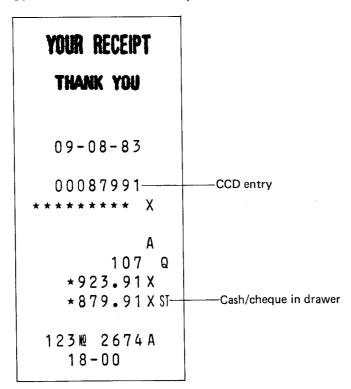
#### (1) Individual clerk reading



#### (2) Full clerk reading and resetting



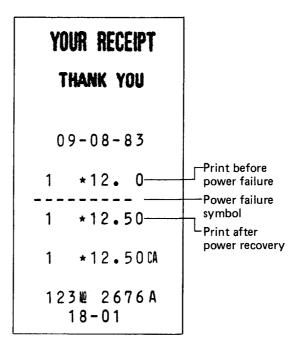
#### Samele individual clerk X report



### IN CASE OF POWER FAILURE

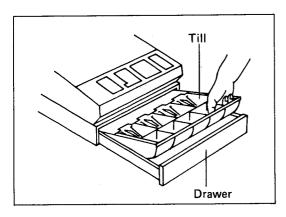
When power is lost, the machine retains its memory contents and all information on sales registrations.

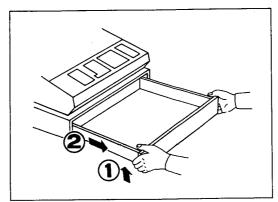
- When power failure is encountered in register IDL state or during registration, the machine returns to the normal state of operation after power recovery.
- 2. When power failure is encountered during a printing cycle the register prints "----" and then carries out the correct printing procedure. (See the sample print.)



# REMOVING THE TILL AND THE DRAWER

The till in the register is detachable. After closing your business for the day remove the till from the drawer and keep the drawer open. This will prevent money from being stolen. To detach the drawer, pull it foreward fully with the till removed, and drawer it out by lifting it up.





# OPENING THE DRAWER BY HAND

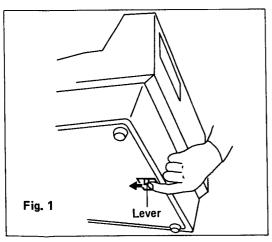
The drawer automatically opens in the usual way, however, when power failure is encountered or the machine is out of order, open the drawer by following the procedure below.

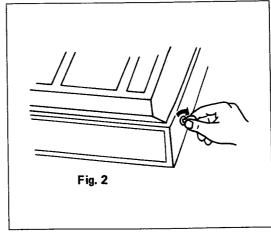
#### For the West Germany model

Push the lever in the opening located on the machine bottom toward the front. (See Fig. 1.) However, the drawer will not open, if it is locked.

#### For the U.K. or Australia model

Insert the key into the drawer lock and turn is 45 degrees clockwise. (See Fig. 2.)

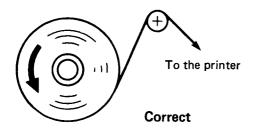


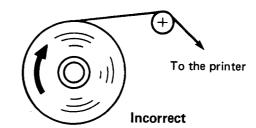


## INSTALLING AND REMOVING THE PAPER ROLL

When installing the paper roll, set it and cut its end as follows.

< Paper roll setting >

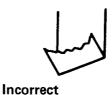




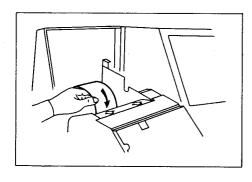
< Paper end cutting >



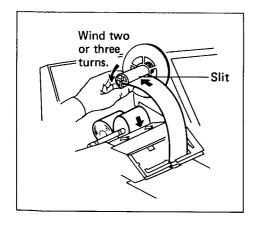




1. Installing the paper rollInstalling the receipt paper roll



- (1) Remove the printer cover.
- (2) Place the paper roll in the paper roll location, insert its end straight into the paper chute of the printer and press the receipt paper feed key.
- Installing the journal paper roll

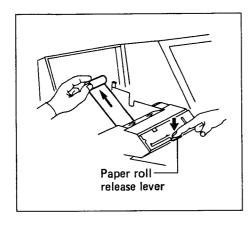


- (1) Set the paper roll following the same procedure as above and press the journal paper feed key.
- (2) Insert the paper end that has come out at the printing area of the printer, into the slit in the paper take-up spool, wind it two or three turns around the spool shaft and install the spool on the bearing.

#### 2. Removing the paper roll

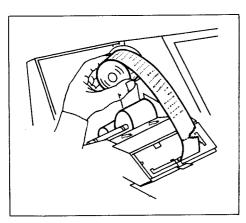
When a red dye appears on the paper roll or when the alarm of paper shortage sounds, it means that it is time to replace the existing paper roll. Replace the paper roll with a new one.

#### ■ Removing the receipt paper roll

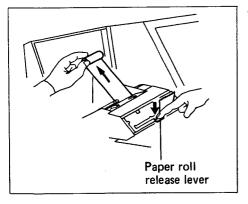


- (1) Remove the printer cover.
- (2) Push in the paper roll release lever in the direction of the arrow and pull out the paper.

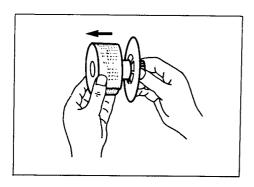
#### ■ Removing the journal paper roll



(1) Press the journal paper feed key to advance the paper by several lines and cut the paper.



(2) Push in the paper roll release lever in the direction of the arrow and pull out the remaining paper.



(3) Remove the paper roll from the take-up spool.

#### Request

Be sure to use paper rolls specified by SHARP.

The use of any other paper rolls than specified could cause paper jamming or imperfect automatic paper cutting, resulting in register malfunction.

Paper specification

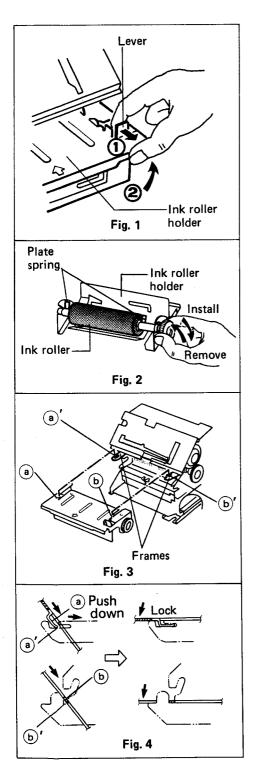
Paper width: 44.5 ± 0.5 mm Max. outside diameter: 83 mm

Weight:  $52.3 - 64.0 \text{ g/m}^2 (45 - 55 \text{ kg/}1000 \text{ sheets/}788 \times 1091 \text{ mm}^2)$ 

Quality: bond paper

## REPLACING THE INK ROLLER

When printing becomes faint, replace the ink roller with a new one specified by SHARP.



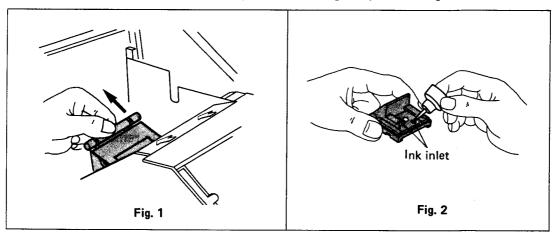
- 1. Remove the printer cover.
- 2. Pull the lever of the ink roller holder toward you (in the direction of arrow ①), lift up the ink roller holder in the direction of arrow ② to remove. (Fig. 1)
- Remove the ink roller from the ink roller holder and install a new ink roller instead. (Fig. 2)
- 4. Mount the ink roller holder on the printer.

Insert the holder into the frames at an angle of 40 degrees, fit positioning projections (a) and (b) of the holder into parts (a)' and (b)' of the frames, then push down the holder to lock it. (Figs. 3 and 4)

5. Replace the printer cover.

### INK REFILL

If logo becomes faint, refill it with logo ink following the procedure given below.



- 1. Remove the printer cover.
- 2. Take out the logo in the direction of the arrow. (Fig. 1)
- 3. Pour two or three drops of ink through the ink inlet provided on the logo back. (Fig. 2)
- 4. Mount the logo in the reverse order of taking out.
- 5. Replace the printer cover.

#### **Precautions**

- 1. The logo ink first gives a clear print 10 to 15 hours after being poured into the logo. Therefore, refilling after the daily business is most effective.
- 2. Overinking should be avoided. This will create a blurry print.
- The ink is exclusively used for the logo.Do not apply the ink to the ink ribbon and ink roller.
  - \* When the supplied ink is exhausted, purchase the logo ink specified by SHARP.

## BEFORE CALLING FOR SERVICE

The malfunctions shown in left-hand column below, labeled "Fault," do not necessarily indicate functional faults of the machine. It is therefore advisable to refer to the "Checking" shown in the right-hand column before calling for service.

Fault	Checking			
(1) The display won't be illuminated even when the mode switch is turned to any other position than "U/OFF".	<ul> <li>Is power supplied to the electric outlet?</li> <li>Is the power cord plug out or loosely connected to the electrical outlet?</li> </ul>			
(2) The display is illuminated, but the whole machine refuses registrations.	<ul> <li>Is the clerk key inserted?</li> <li>Is the mode switch set properly at the "REG" position?</li> </ul>			
(3) No receipt is issued.	<ul> <li>Is the receipt roll-paper properly installed?</li> <li>Is there a paper jam?</li> <li>Is the receipt ON-OFF switch at the "OFF" position?</li> </ul>			
(4) No journal paper is taken up.	<ul> <li>Is the take-up spool installed on the bearing properly?</li> <li>Is there a paper jam?</li> </ul>			
(5) Printing is unusual.	<ul> <li>Is the ink roller installed properly?</li> <li>Is the ink roller life completed?</li> </ul>			

## **SPECIFICATIONS**

Model:	ER-2905/2908					
External dimensions:						
West Germany model:	$405(W) \times 423(D) \times 362.5$ or $509(H)*mm$ *Height of the machine with a customer display					
U.K. or Australia model:	440(W) $\times$ 460(D) $\times$ 367.5 or 514(H)*mm  *Height of the machine with a customer display					
Weight:	West Germany model: 15.0 kg (ER-2905), 15.3 kg (ER-2908) U.K. or Australia model: 17.5 kg (ER-2905), 17.8 kg (ER-2908)					
Power supply:	AC local voltage ±10% 50/60 Hz					
Power consumption:	Stand-by 15W Operating 45W					
Operating temperature:	0 to 40°C					
Electronics:	LSI (CPU), etc.					
Totalizers:	ER-2905: 113 ER-2908: 120					
Counters:	ER-2905: 48 ER-2908: 55					
Built-in battery:	Ni-Cd rechargeable battery, memory holding time about 1 month (with fully charged built-in battery, at room temperature)					
Display:	Fluorescent display tube					
Printer: Printing system; Printing speed; Printing capacity;	Type drum selection 3 lines/sec. (max.) 12 digits (amount: 10 digits, symbol: 2 digits)					
Ink roller:	Color: Purple (single color) Dimensions: $22\phi \times 90$ mm Life: 0.6 millions of lines Part no.: NROLR6638RCZZ					
Logo:	Dimensions of the printing face: 30 mm (W) x 20 mm (H)					
Paper roll:	Width: $44.5 \pm 0.5$ mm Max. diam.: 83 mm Weight: $52.3 \sim 64.0$ g/m² (bond paper)					
Cash drawer:	4 slots for bills, and 5 for coins (for the West Germany model 4 slots for bills, and 8 for coins (for the U.K. model) 6 slots for bills, and 5 for coins (for the Australia model)					

Accessories:	Master key	2			
	Sub-master key	2			
	Operator key	2			
	Drawer lock key	2			
	Printer cover key	2			
	Ink roller	1 (mounted on the main body)			
	Standard logo	1) (mounted on the main body			
	Logo ink	1			
	Paper roll	2			
	Spool	1			
	Dust cover	1 sheet			
	Instruction manual	1 copy			
	Bill separator	1			
	Coin subcase	1			

<sup>\*</sup> Specifications and appearance subject to change without notice for improvement.

### LIST OF OPTIONS

For the ER-2905/2908, the following options are available. For details, contact your dealer.

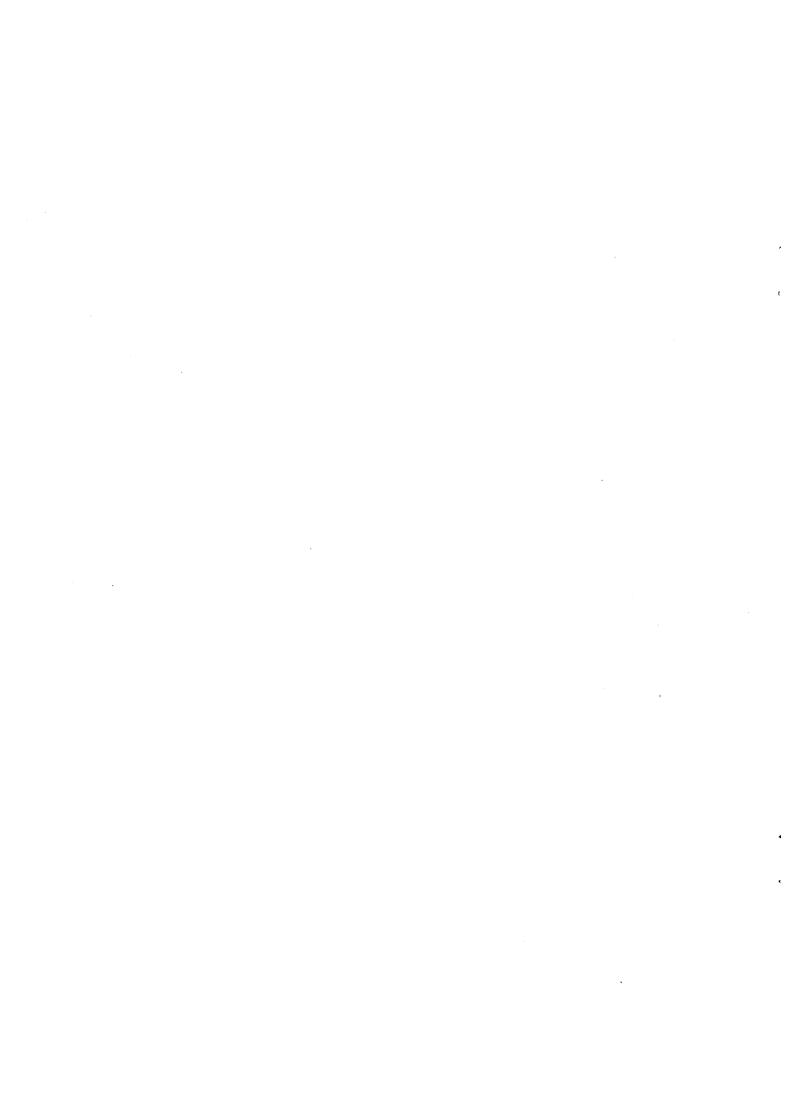
- 1. Price look-up kit model ER-45PL4 (or ER-45PL6)
  - The ER-45PL4 (or ER-45PL6) provides 99 PLUs.
- 2. Department up-grade kit models ER-29DT and ER-29DT2
  - The ER-29DT2 is specialized for the ER-2905 register and enables increasing the number of departments to 8.
  - The ER-29DT is specialized for the ER-2908 register and enables increasing the number of departments to 10, 15, or 20.
- 3. Flexible key layout/VAT function model ER-29RM
  - The ER-29RM enables the change in key layout and provides the VAT function.
- 4. Remote drawer model ER-29DW1
  - The ER-29DW1 may be connected to the ER-2908 register alone.
- 5. Till cover model ER-37CV
- 6. External battery unit model ER-20BT2
  - The use of this unit enables you to operate the ER-2905/2908 even at power failure.
  - This unit allows 2 hours of continuous operation when fully charged.

- K	(ey	label	VAT	for	VAT	(Value	Added	Tax)	function	_
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If your register is equipped with the optional VAT (Value Added Tax) function, cut off the key label VAT printed below by means of scissors or the like and replace the key label RCPT with it.

VAT

VAT



## INTRODUCTION

Thank you very much for your purchase of the SHARP Electronic Cash Register, Model ER-2905/2908,

Please read this Manual carefully before operating your machine in order to gain a full understanding of its function and performance.

Please keep this Manual for future reference, it will help you, if you encounter any operational problems.

### **IMPORTANT**

- Install your ER-2905/2908 in a location that is not subject to direct radiation, unusual temperature changes, high humidity or exposed to water sources.
   Installation in such locations could cause damage to the cabinet and the electrical components.
- The register should not be operated by an individual with wet hands.
   The water could seep into the interior of the ER-2905/2908 and cause component failure.
- When cleaning your register, use a dry, soft cloth. Never use volatile liquid, such as benzine and thinner.
  - The use of such chemicals will lead to discoloration or deterioration of the cabinet.
- $\bullet$  The ER-2905/2908 register plugs into any standard wall outlet (local voltage  $\pm$  10% AC).
  - Other electrical devices on the same electrical circuit could cause the ER-2905/2908 to malfunction.
- If the register malfunctions call your local dealer for service Do not try to repair the register yourself.
- For a complete electrical disconnection pull out the mains plug.

### PRECAUTION

This Electronic Cash Register has a built-in memory protection circuit which is operated by rechargeable batteries.

As you know, all batteries will, in time, dissipate their charge even if not used.

Therefore to insure an adequate initial charge in the protection circuit, and to prevent any possible loss of memory upon installation, it is recommended that each unit be allowed to recharge for a period of 24 to 48 hours prior to use by the customer.

In order to charge the batteries, the machine must be plugged in and left on in the "REGISTER MODE". This recharging precaution can prevent unnecessary initial service calls.